



QEEG Clinical Report

BrainLens V0.4

Report Description



Personal & Clinical Data

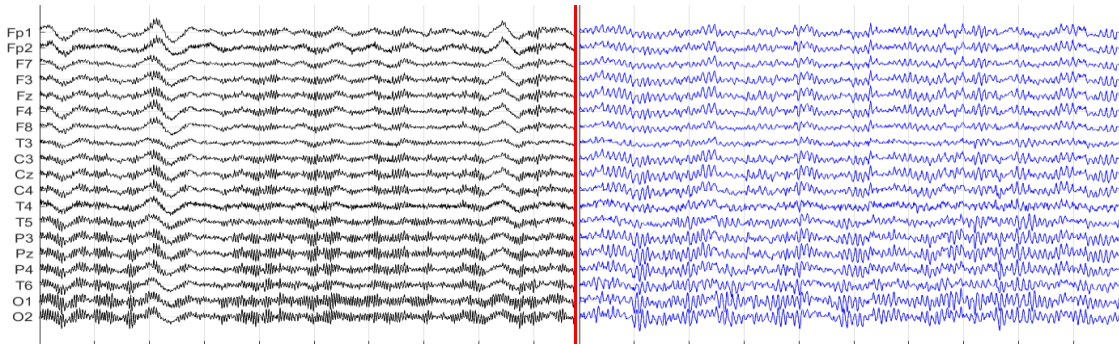
Name	Mehri Masoudi	Date of Recording	07-Oct-2023
Date of Birth - Age	11-Jun-1994 - 29.32	Gender	Female
Handedness(R/L)	Right	Source of Referral	Dr Irannezhad
Initial Diagnosis	Anxiety-Depression-PIC-OCD		
Current Medication	-		

Dr Irannezhad

Denoising Information (EC)

Raw EEG

Denoised EEG



Flat Channels

Rejected Channels

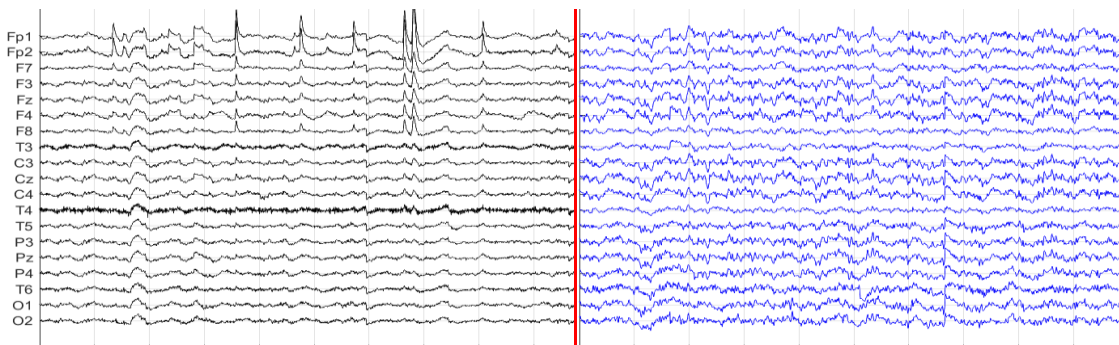


Number of Eye and Muscle Elements				Low Artifact Percentage	
Eye	4	Muscle	0		
Total Artifact Percentage				High Artifact Percentage	
EEG Quality		good		Total Recording Time Remaining	
				243.64 sec	

Denoising Information (EO)

Raw EEG

Denoised EEG



Flat Channels

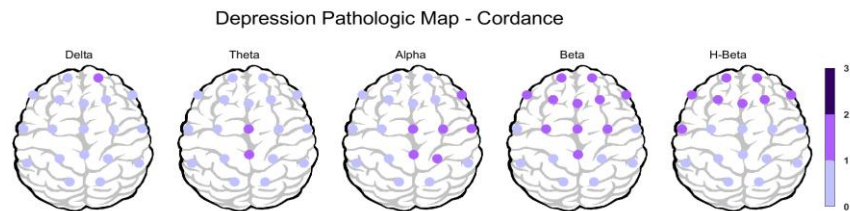
Rejected Channels



Number of Eye and Muscle Elements				Low Artifact Percentage	
Eye	4	Muscle	2		
Total Artifact Percentage				High Artifact Percentage	
EEG Quality		bad		Total Recording Time Remaining	
				250.74 sec	

Pathological assessment for Depression

Compare to Depression Database



Depression Probability

Depression Table	EC		EO	
Feature Name	Threshold	Region	Threshold	Region
Increased Global rAlpha	0.50	global	0.00	NAN
Increased global rTheta	0.00	NAN	0.00	NAN
Decreased rDelta	-0.50	O	0.00	NAN
Increased rBeta	0.50	P-O-	0.50	RT
Left FAA	-0.03	Left FAA	-0.03	Left FAA
Right OAA	0.00	NAN	0.00	NAN
Decreased Coherence	0.00	NAN	0.00	NAN
Increased Coherence	1.00	Decreased Coherence	1.00	Decreased Coherence

0 10 20 30 40 50 60 70 80 90

Depression Probability

Depression Probability

Depression Severity



Anxiety Severity

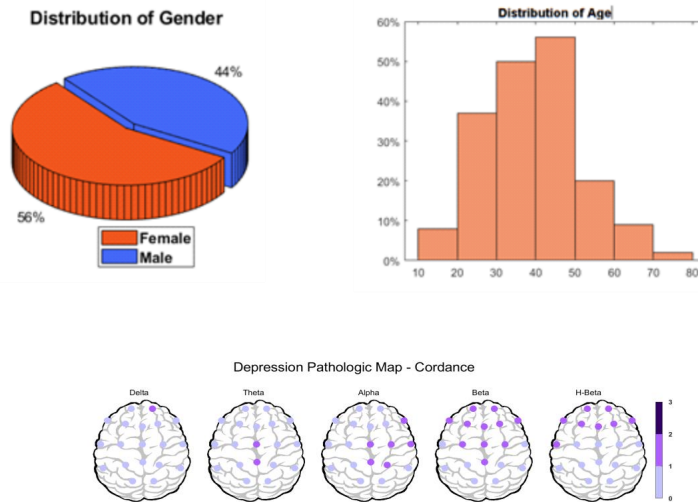


rTMS Response Prediction

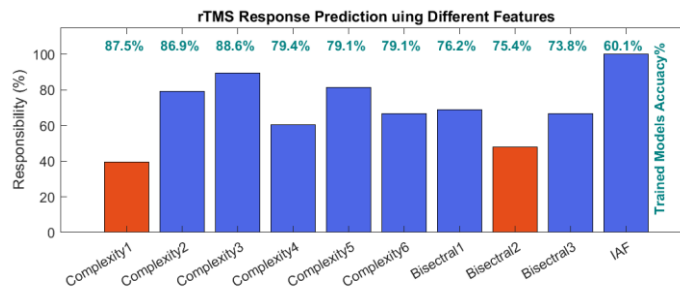
Network Performance

Accuracy: 92.1%
Sensitivity: 89.13%
Specificity: 97.47%

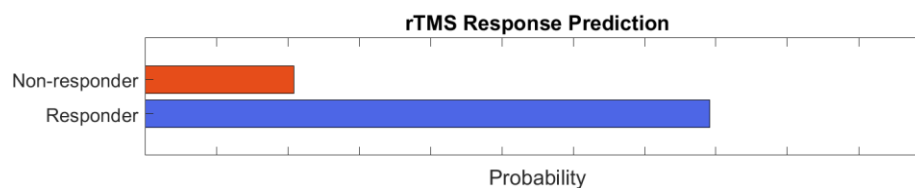
Participants Information



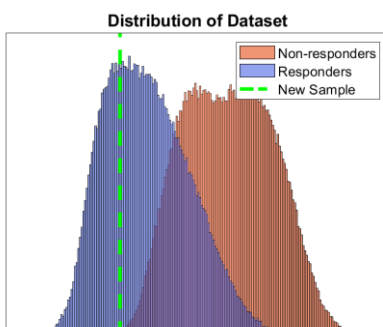
Features Information



Responsibility



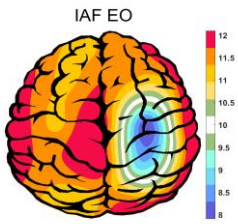
Data Distribution



About Predicting rTMS Response

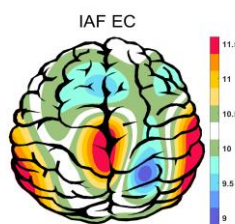
This index was obtained based on machine learning approaches and by examining the QEEG biomarkers of more than 470 cases treated with rTMS. The cases were diagnosed with depression (with and without comorbidity) and all were medication free. By examining more than 40 biomarkers capable of predicting response to rTMS treatment in previous studies and with data analysis, finally 10 biomarkers including bispectral and nonlinear features entered the machine learning process. The final chart can distinguish between rTMS responsive and resistant cases with 92.1% accuracy. This difference rate is much higher than the average response to treatment of 44%, in the selection of patients with clinical criteria, and is an important finding in the direction of personalized treatment for rTMS.

IAF(EO)



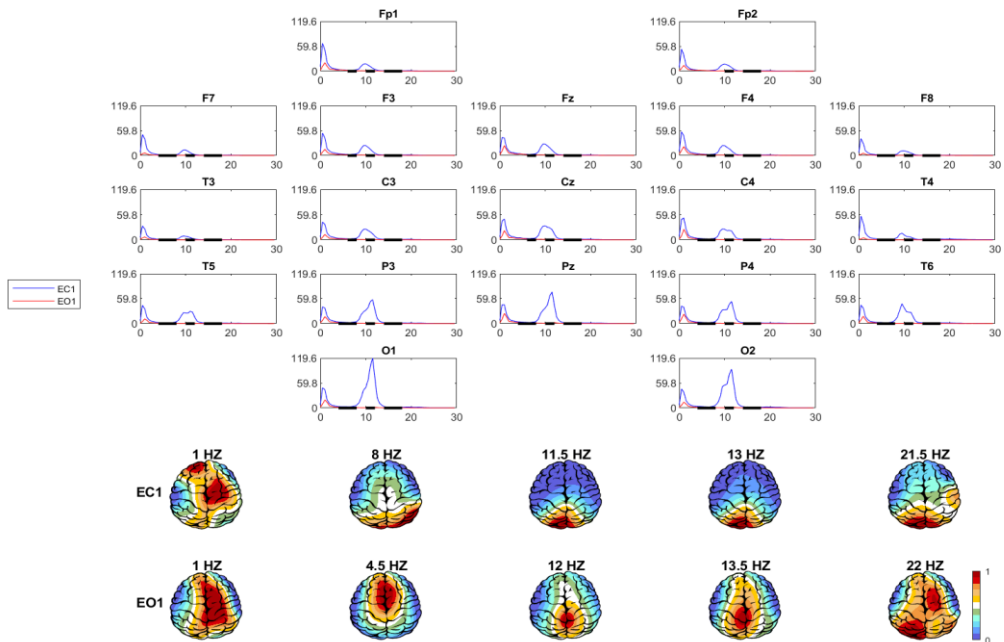
Eye Open IAF= 12.00

IAF(EC)

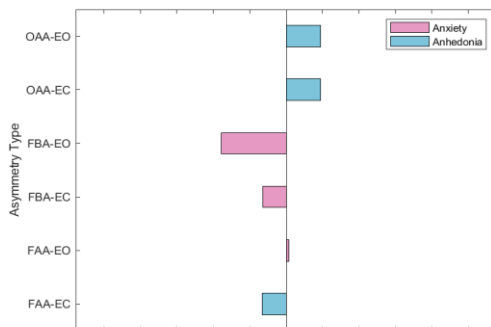


Eye Close IAF= 11.50

EEG Spectra



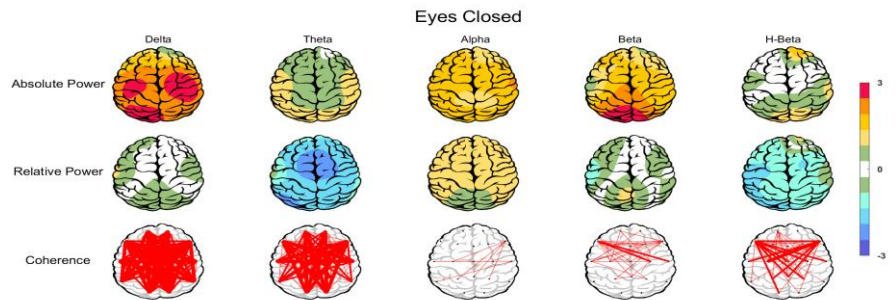
Alpha Asymmetry(AA)



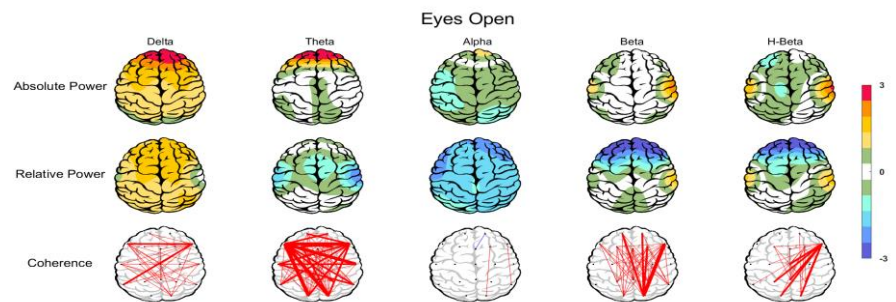
Alpha Blocking



Z Score Summary Information (EC)



Z Score Summary Information (EO)



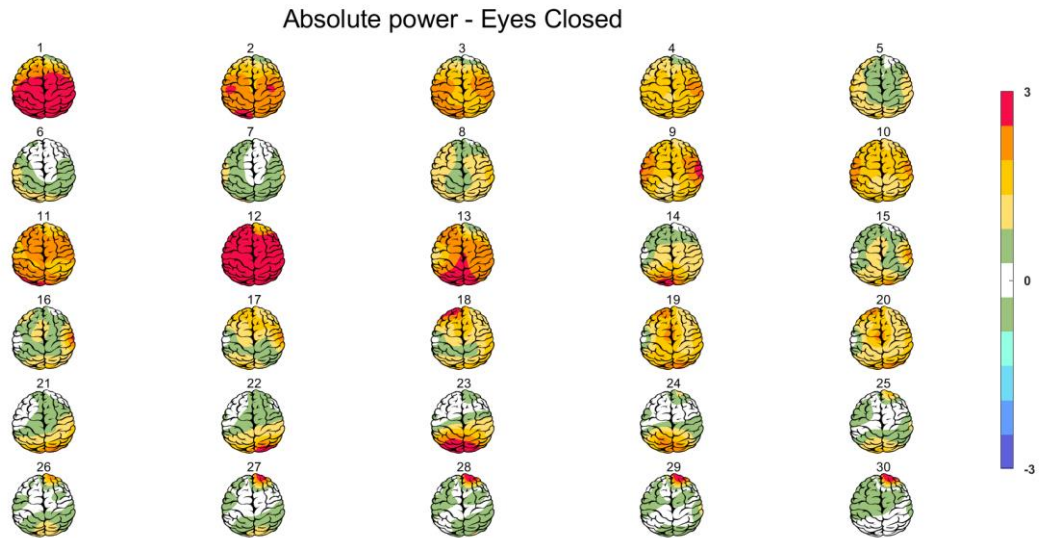
E.C.T/B Ratio (Raw- Z Score)



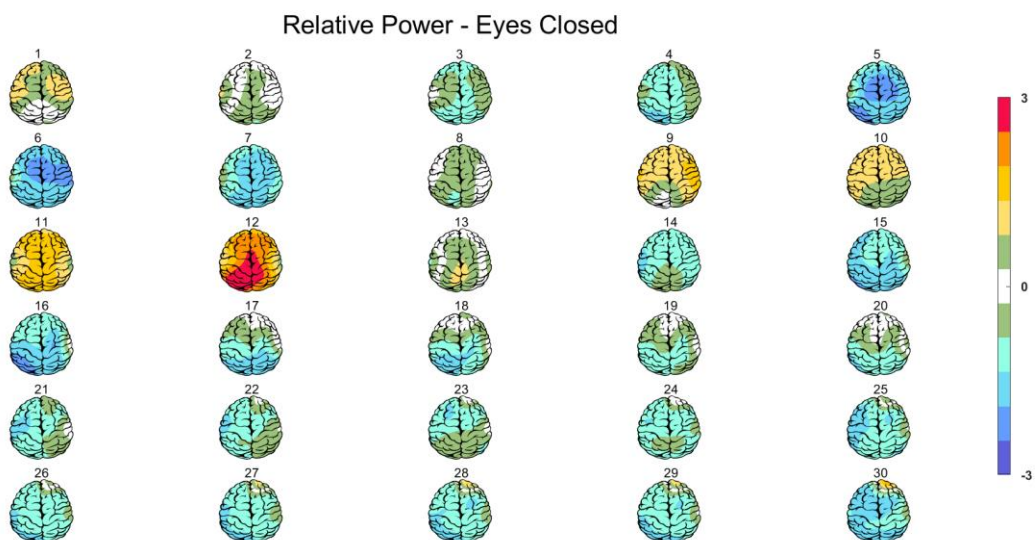
E.O.T/B Ratio (Raw- Z Score)



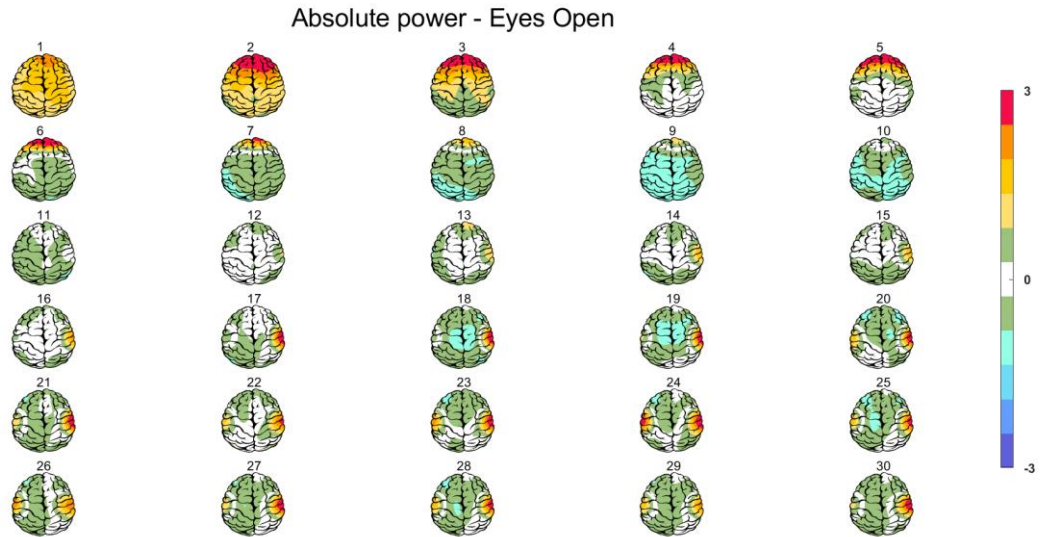
Absolute Power-Eye Closed (EC)



Relative Power-Eye Closed (EC)



Absolute Power-Eye Open (EO)



Relative Power-Eye Open (EO)

